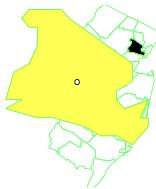


# MONTCLAIR/ WEST ORANGE RADIUM SITE NEW JERSEY

EPA ID# NJD980785653



**EPA REGION 2**  
**CONGRESSIONAL**  
**DISTRICT 08 & 10**  
Essex County  
Montclair and West Orange

## Site Description

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The Montclair/West Orange Radium site includes more than 460 properties on 120 acres of residential land. The soil at the site is contaminated with radioactive waste materials suspected to have originated from radium-processing facilities located nearby during the early 1900s. Some of the radium-contaminated soil was used as fill in low-lying areas or was mixed with cement for sidewalks and foundations. This site is similar to the nearby Glen Ridge Radium site, which also contains radium-contaminated soils from the same sources. Because of their proximity and the similarity of the contamination present, the Montclair/West Orange and Glen Ridge Radium sites are being addressed jointly. It is believed that an estimated 200,000 cubic yards of contaminated material are scattered on private and public lands within the three communities. In 1983, the State of New Jersey discovered a number of homes with high levels of radon gas and radon decay products, as well as excessive levels of indoor and outdoor gamma radiation.

**Site Responsibility:** This site is being addressed through Federal and State actions.

### NPL LISTING HISTORY

Proposed Date: 10/01/84  
Final Date: 02/01/85

## Threats and Contaminants

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The soil on the site is contaminated, to varying degrees, with radium. When this material is located in and around a home, it may result in high levels of radon gas and gamma radiation in the home. Radon is a decay product of radium and gamma radiation is the energy released during the decay process. People who are exposed to the radium, radon, radon decay products and elevated levels of gamma radiation may be at risk. In addition, accidental ingestion of soil may cause adverse health effects.



## Cleanup Approach

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This site has been addressed in stages: emergency actions and long-term remedial phases focusing on cleanup of the soil, structures, and groundwater.

### Response Action Status

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**Emergency Actions:** In 1983, the EPA installed temporary ventilation systems to reduce the radon concentrations in 38 homes included in this site and the Glen Ridge Radium site. In addition, shielding from gamma radiation was installed in 12 homes.

The radon systems were upgraded to higher efficiency units in 1990 and 1991 at which time two additional units were installed.



**Soil and Structures:** In 1989, EPA selected a remedy to address the most severely contaminated properties, and deferred to the 1990 Record of Decision (ROD) for the selection of a remedy for the remaining less contaminated properties and contaminated public areas and streets. The selected remedy involves the excavation and off-site disposal of all radium-contaminated soil from public and private properties, followed by restoration of the properties.

Remediation begins with an investigation of the contaminated property to determine the location, magnitude and extent of contamination. A design is then developed which details the method of excavation and restoration of the property. Remediation of a property can range from the removal of a small area to total excavation of material from the perimeter of the house and beneath the basement slab. In the most extensively contaminated properties, the homeowner must be relocated while the cleanup is in progress.



**Groundwater:** The EPA is conducting a study to determine whether the groundwater has become tainted by the contaminated soil. Sampling of the groundwater wells was

completed in the fall of 2001. The data is currently being evaluated and a Remedial Investigation and Feasibility Study is expected to be completed this summer.

## Cleanup Progress



The contaminated properties were categorized in phases so as to address the most severe contamination first, and not cause undue stress from construction activities on any one specific residential area. The Pilot Phase, as well as Phases I through VII have been completed. To date, more than 80,000 cubic yards of contaminated soil have been excavated and disposed of off-site. Remediation of contaminated roadbeds in West Orange and Montclair has been completed.